





July 24, 2017

Joseph Laydon

Grafton Municipal Center

30 Providence Road

Grafton, MA 01519

Town Planner

JIII 2 4 2017

GRAFTON, MA

Maria Mast PLANNING BOARD Conservation Agent **Grafton Municipal Center** 30 Providence Road Grafton, MA 01519

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Subject:

Proposed Registered Marijuana Facility

8 Millennium Drive

Special Permit, Site Plan, Stormwater Regulations and Wetland

Regulations Review

Dear Joe and Maria:

We received the following documents on July 12, 2017:

- Correspondence from Heritage Design Group to the Grafton Town Planner, dated July 7, 2017 re: Site Plan Review - Special Permit.
- Plans entitled 8 Millennium Drive, Site Plan in the Town of Grafton, Massachusetts dated May 8, 2017 and last revised July 7, 2017, prepared by Heritage Design Group for Nature's Remedy of Massachusetts, Inc. (12 sheets)
- Document entitled Traffic Impact Analysis for the Nature's Remedy, Grafton, Massachusetts dated June 2017, prepared by Pare Corporation for Heritage Design Group.
- Document entitled Stormwater Management Report, Proposed Registered Marijuana Dispensary, 8 Millennium Drive, Grafton, Massachusetts revised July 7, 2017, prepared by Heritage Design Group for Nature's Remedy of Massachusetts, Inc.
- Concept Plan of project sign prepared by Sunshine Sign, undated.
- Plan of front building elevation prepared by Engel Architects, undated.

Graves Engineering, Inc. (GEI) has been requested to review and comment on the plans' conformance with applicable "Grafton Zoning By-Law" amended through October 17, 2016; Massachusetts Department of Environmental Protection (MassDEP) Stormwater Handbook and standard engineering practices on behalf of the Planning Board. GEI has also been requested to review and comment on the documents' conformance with applicable Conservation Commission "Regulations Governing Stormwater Management" dated May 2013 and "Regulations for the Administration of the Wetlands By-Law" dated May 2014 on behalf of the Conservation Commission. As part of this review GEI visited the site entrance on June 21, 2017.

This letter is a follow-up to our previous review letter dated June 21, 2017. For clarity, comments from our previous letter are italicized and our comments to the design engineer's responses are depicted in bold. Previous comment numbering has been maintained.



Our comments follow:

Zoning By-Law

- A proposed dumpster pad was not shown on the plans. The Board may wish to inquire of the applicant if a dumpster is to be used or if trash will be stored within the building. (§1.3.3.3.d.24)
 - Acknowledged. A dumpster pad was added at the southeast corner of the building. The dumpster and recycle container were labeled on Sheet 5.
- The plans don't identify the height of the chain link fence that is proposed to surround the developed area of the site. (§1.3.3.3.d.27)
 Acknowledged. Sheet 3 has been revised to show the height (8') of the proposed chain link fence.
- A waiver has been requested from sign regulation §4.4.3.4.4 regarding sign area. We understand the Planning Board will address waiver requests.
 No further comment necessary.

Grafton's Regulations Governing Stormwater Management

- 4. A cost estimate for the stormwater system and a timeline for construction were not included in the submittal. (§7.A)
 The design engineer responded that the revised site plan will be forwarded to a site contractor for an estimate and projected timeline and the information will be submitted when it is received.
- 5. A limit of work line needs to be shown on the Erosion Control Plan (Sheet 7) to define the limits of clearing and the limits of work in areas where erosion control barriers were not proposed (e.g. where erosion barriers would be upslope of work limits). (§7.B.2.b) Acknowledged. A limit of work line has been added to the Erosion Control Plan (Sheet 7).
- 6. The on-site locations to be used for storage of materials during construction and post-construction snow storage need to be shown on the Erosion Control Plan (Sheet 7). (§7.B.2.f)

 Acknowledged. A construction stockpile and staging area and snow storage areas have been added to the Erosion Control Plan (Sheet 7).

Regulations for the Administration of the Wetlands By-Law

7. A site-specific phasing or sequencing plan must be submitted for any project disturbing three or more acres. The project will disturb approximately 5.8 acres. (§V.B.5.(f))
Acknowledged. A phasing plan has been submitted as an attachment to Heritage Design Group's July 7, 2017 correspondence. The project phasing is not unreasonable. GEI recommends that permanent soil stabilization should be performed when possible as work (e.g. cut and fill slope grading, stormwater basin construction) is executed.

- 8. A waiver was requested to exclude fencing of the stormwater basin. We understand the Conservation Commission will address waiver requests. (§V.B.5.(h).3)

 No further comment necessary.
- 9. The forebay appears to be undersized; GEI estimated that the forebay volume is approximately 33% of the required volume. A minimum volume of 0.1 inch times the tributary area is required. Also, supporting calculations need to be provided to demonstrate compliance. (§V.B.5.(h).6)

 Acknowledged. The forebay was enlarged and supporting forebay sizing

Hydrology & MassDEP Stormwater Management Review

calculations were submitted. The calculations are in order.

- 10. GEI reviewed the hydrology computations and found them to be in order except as noted in the following comment. The hydrology computations accounted for the future building addition and associated ground cover.
 - The revised hydrology computations are in order. Again, the hydrology computations accounted for the future building addition and associated ground cover.
- 11. Reach S1: Swale 1 was modeled with an invert of 406.00 but the plans showed 404.5 (HDWL 1 invert). Additionally, Reach S3: Swale 3 was modeled with an invert of 404.00 but the plans showed 400.4 (HDWL 3 invert).

 Acknowledged. The inverts for Swales 1 and 3 are now consistent between the plans and hydrology models.
- 12. For any future submittals, the text on the Drainage Areas plans must be legible. Text for the topographic contours was difficult to read, but we were able to perform a review of the hydrology calculations. Acknowledged. The text was reasonably legible on the revised "Developed Drain Areas" Plan.
- 13. Compliance with the MassDEP Stormwater Standards and Handbook is reasonable except as noted in the following six comments.

 Compliance with the MassDEP Stormwater Standards and Handbook is reasonable.
- 14. We are concerned that the sand filter may not receive stormwater during small storm events. Sheet 4 shows a gabion wall to create the forebay's impoundment. A gabion wall consists of porous stone and the bottom of the gabion wall (elevation 394 feet) is two feet lower than the riser pipe's invert elevation (396.0 feet). During small storm events, stormwater will pass through the gabion wall instead of flowing through the sand filter. Similarly, on Sheet 10 the Sediment Forebay construction detail needs to clarify the type of materials to be used to construct the wall; the construction detail shows "concrete blocks or gabions".
 - Acknowledged. The proposed gabions have been replaced with a concrete block spillway to ensure that small storms will be routed to the sand filter.
- 15. At the stormwater basin, there will only be 0.45 feet of freeboard as measured between the peak 100-year water surface and the top of the berm. At least 1.0 feet of freeboard needs to be provided.

Acknowledged. The plans and hydrology computations were revised. One-foot of freeboard has been provided during a 100-year storm event.

- 16. The top of the gabion wall that separates the forebay from the main stormwater basin was proposed at the same height as the basin's berm. The gabion wall needs to be sufficiently lower than the berm so that if the gabion wall is overtopped, stormwater will flow into the main basin instead of to the nearby wetlands.
 - Acknowledged. The top of the forebay's spillway was lowered.
- 17. The long-term Operation and Maintenance Plan (Standard 9) needs to address operation and maintenance of the sand filter.
 - Acknowledged. The long-term Operation and Maintenance Plan (Standard 9) has been revised to address operation and maintenance of the sand filter.
- 18. The Erosion Control Barrier (ECB) detail on Sheet 7 shows staked straw wattles with and without silt fencing. It is unclear on the plans where the straw wattles will or will not include silt fence; the plans must be revised to clearly show where each type of erosion control barrier is proposed.
 - The design engineer responded that the silt fencing shown on the ECB detail is only to provide guidance if installation of silt fence is directed during construction. The ECB detail has been revised to reflect this. Considering the extent of work and the work's proximity to wetland resource areas, the effectiveness of the erosion controls will need to be carefully monitored and quick action (if needed) to install silt fence will need to be taken if the straw wattles/fiber socks are breached.
- 19. The locations of a stabilized construction entrance and material stockpile area(s) need to be shown on the Erosion Control Plan (Sheet 7).
 - Acknowledged. The Erosion Control Plan (Sheet 7) has been revised to show the locations of a stabilized construction entrance and a material stockpile area.

General Engineering

- 20. The plans don't propose radii at the driveway entrance and bituminous berm is proposed on only one side of the driveway entrance. The driveway must have vertical granite curb of sufficient radii to tie into the existing Millennium Drive vertical granite curb. Whereas the driveway on the abutting land of Primary Colors is proximate to the proposed driveway, it would be prudent for the plans to also show the curb radii at the Primary Colors' driveway entrance.
 - Acknowledged. The plans have been revised to show the proposed radii at the driveway entrance as well as at the Primary Colors' driveway entrance. Also, the driveway now has vertical granite curb at the driveway entrance and sloped granite edging at the parking area.
- 21. For the benefit of the contractor, a construction detail needs to be provided for the riser that will divert stormwater to the sand filter. Sheet 4 includes a pipe invert elevation for the riser but no other riser information was provided.
 - Acknowledged. Sheet 10 has been revised to include a riser detail for the forebay outlet.

22. A construction detail (e.g. signs, pavement markings) for the handicap-accessible parking spaces was not provided on the plans. Additionally, the plans did not show the locations of the accessible parking space signs.
Although the design engineer responded that the plans were revised to indicate

sign locations and pavement markings for the handicap accessible parking spaces, we could not find this information on the plans.

- 23. On Sheet 4, the riprap in Swale 2 needs to be extended northerly approximately 30 feet to protect the swale's side slope located across from the 24" pipe that discharges from headwall HDWL 4 into Swale 2.

 Acknowledged. The enlarged forebay design addressed our concern.
- 24. The topographic contours in Swale 3 up-gradient of headwall HDWL 3 need to be re-evaluated and likely revised. There is a proposed 406 contour approximately 135 feet up-gradient of HDWL 3 and the HDWL invert elevation is 400.40. There is only one proposed contour between the headwall and the 406 contour, but two contours should be present. Acknowledged. The proposed contours in Swale 3 have been revised.
- 25. The narrative for MassDEP Stormwater Standard 10 (Illicit Discharges) references piping for the proposed roof drains and the architectural plans show roof gutters. If piping for the gutters is to discharge into the swales, then the pipes need to be shown on the plans along with pertinent information (e.g. pipe size, material, elevations, slopes and erosion protection at the discharge end).

 Although the engineer responded that roof downspouts will discharge above ground to maintain an open drainage system and that the narrative was revised to no longer reference roof drains, the MassDEP Stormwater Standard 10 narrative still references roof drains.
- 26. Pipe size, slope and length were missing on the plans for the drain pipe between the sand filter outlet and HDWL 5 and between the forebay outlet and sand filter.

 Acknowledged. The plans have been revised to show the pipe size, slope and length for the drain pipe between these two pipes.
- 27. No lighting was proposed to the south of the building or within/around the parking area to the north of the building. Whereas the dispensary will be open after sundown in the winter months, lighting should be provided in the northern parking area. Also, the Planning Board may also wish to inquire if lighting is proposed around the building for security purposes. Acknowledged. The plans have been revised to include wallpack lighting on the west, south and east sides of the building and two light poles were added in the parking area.
- 28. Whereas the grass swales will be in service immediately after their construction, turf matting needs to be place on the bottom and interior side slopes of the swales to prevent erosion while the grass is maturing.

 Acknowledged. The Grass Swale Section construction detail has been revised to show turf matting in the swale.

General Comments

29. The sand filter construction detail on Sheet 10 shows elevations in the 90's that should read in the 390's.

The Sand Filter construction detail elevations have been revised.

30. GEI has not reviewed the plans with respect to the proposed water and sewer utilities. We understand that the Grafton Water District and the Grafton Sewer Department will review the proposed water and sewer utilities.

No further comment necessary.

We trust this letter addresses your review requirements. Feel free to contact this office if you have any questions or comments.

Very truly yours,

Graves Engineering, Inc.

Jeffrey M. Walsh, P.E.

Vice President

cc: Eric Bazzett, P.E.; Heritage Design Group